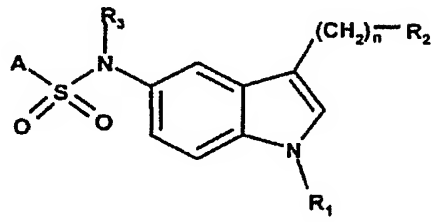
CLAIMS

1. A sulphonamide derivative with the general formula (I)



(I)

wherein

A represents a substituent selected from among:

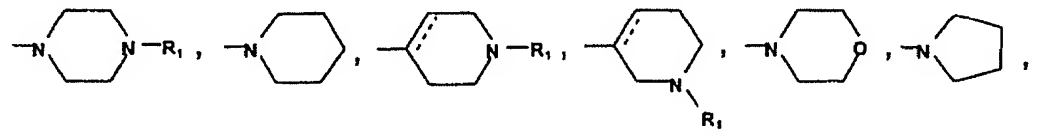
- a heteroaromatic ring of 5 or 6 members containing 1 or 2 heteroatoms selected from among oxygen, nitrogen and sulphur, optionally substituted by 1 or 2 halogen atoms, by a C_1-C_4 alkyl radical or by a phenyl radical or a heteroaryl radical with 5 or 6 members containing 1 or 2 atoms of oxygen, nitrogen or sulphur;

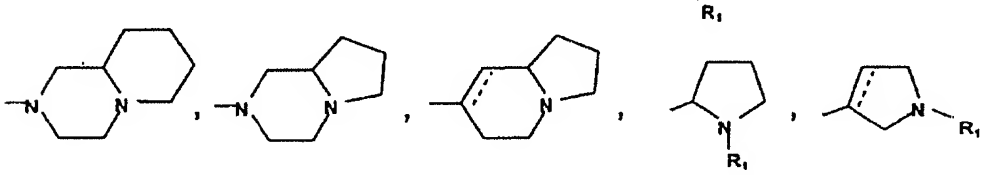
- a bicyclic heteroaromatic ring containing 1 to 3 heteroatoms selected from among oxygen, nitrogen and sulphur, optionally substituted by 1 or 2 halogen atoms or by a C_1-C_4 alkyl radical;

R_1 represents hydrogen, a C_1-C_4 alkyl radical or a benzyl radical;

n represents 0, 1, 2, 3 or 4;

R_2 represents $-NR_4R_5$ or a group with formula:





wherein the dotted line represents an optional chemical bond;
R_3, R_4 y R_5 independently represent hydrogen or a C_1-C_4 alkyl;
or one of its physiologically acceptable salts.

2. A compound, according to claim 1, selected from among the following group:
[1] N-[3-(2-diethylaminoethyl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[6] N-[3-(2-diethylaminoethyl)-1*H*-indol-5-yl]-5-chlorothiophene-2-sulphonamide.
[7] N-[3-(2-dimethylaminoethyl)-1*H*-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[9] N-[3-(2-dimethylamino-ethyl)-1*H*-indol-5-yl]-6-chloroimidazo[2,1-b]thiazol-5-sulphonamide.
[10] N-[3-(1-methylpiperidin-4-yl)-1*H*-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[11] N-[3-(1-methylpiperidin-4-yl)-1*H*-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide hydrochloride.
[14] N-[3-(1-methylpiperidin-4-yl)-1*H*-indol-5-yl]-5-chlorothiophene-2-sulphonamide.
[16] N-[3-(1-methylpiperidin-4-yl)-1*H*-indol-5-yl]quinoline-8-sulphonamide.
[19] N-[3-(4-methylpiperazin-1-yl)methyl-1*H*-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[20] N-[3-(2-dimethylaminoethyl)-1*H*-indol-5-yl]-5-(2-pyridil)thiophene-2-sulphonamide.
[21] N-[3-(2-dimethylaminoethyl)-1*H*-indol-5-yl]-2,1,3- benzothiadiazol-4-sulphonamide.
[22] N-[3-(2-dimethylaminoethyl)-1*H*-indol-5-yl]quinoline-8-sulphonamide.
[27] N-{3-[2-(morpholin-4-yl)ethyl]-1H-indol-5-yl}-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[30] N-[3-dimethylaminomethyl-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[32] N-[3-(2-dipropylaminoethyl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[33] N-[3-(2-dibutylaminoethyl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.
[38] N-[3-(octahydroindolizin-7-yl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.

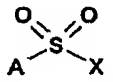
[39] N-[3-(2-diethylaminoethyl)-1*H*-indol-5-yl]-6-chloroimidazo[2,1-b]thiazol-5-sulphonamide.

[43] N-[3-(3-diethylaminopropyl)-1H-indol-5-yl]-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.

[44] N-{3-[2-(pyrrolidin-1-yl)ethyl]-1H-indol-5-yl}-5-chloro-3-methylbenzo[b]thiophene-2-sulphonamide.

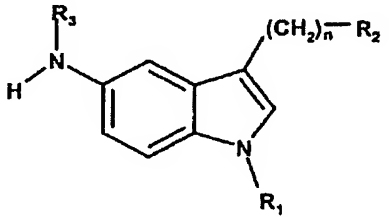
[50] N-{3-[2-(morpholin-4-yl)ethyl]-1H-indol-5-yl}quinoline-8-sulphonamide.

3. Process for preparing a sulphonamide derivative with the general formula (I), according to claim 1, characterised by making react a compound with the general formula (II), or one of its suitably protected derivatives,



(II)

wherein A has the meaning indicated previously in the general formula (I) of claim 1, and X is a suitable leaving group including an halogen atom, particularly chlorine;
with a 5-aminoindole with the general formula (III), or one of its suitably protected derivatives;



(III)

wherein n, R_1, R_2 and R_3 have the meanings indicated above in the general formula (I) of claim 1;
in order to obtain the corresponding sulphonamide, and optionally it is possible to remove

eventually the protective groups from it.

4. Process for preparing a sulphonamide derivative with the general formula (I), according to claim 1, wherein R_1, R_2, R_4, n and A have the meanings indicated above in claim 1, and R_3 represents a C_1-C_4 alkyl, characterised by making react a compound with the general formula (I), wherein R_1, R_2, R_4, n and A have the meanings indicated above in claim 1, and R_3 represents an atom of hydrogen, with an alkyl halide or dialkyl sulphate.

5. Process for preparing a sulphonamide derivative with the general formula (I), according to claim 1, wherein R_1, R_3, and A have the meanings indicated above in claim 1, n=0 and R_2 represents a 1,2,3,6-tetrahydropyridin-4-yl radical substituted in position 1 with an R_1 radical, characterised by making react a compound with the general formula (I), wherein R_1, R_3, and A have the meanings indicated above in claim 1, n=0 and R_2 represents an atom of hydrogen, with a 4-piperidone substituted in position 1 with an R_1 radical.

6. Process for preparing a sulphonamide derivative with the general formula (I), according to claim 1, wherein R_1, R_3, and A have the meanings indicated above in claim 1, n=0 and R_2 represents a 4-piperidinyl radical substituted in position 1 with an R_1 radical, by reduction of a compound with the general formula (I) wherein R_1, R_3, and A have the meanings indicated above in claim 1, n=0 and R_2 represents a 1,2,3,6-tetrahydropyridin-4-yl radical substituted in position 1 with an R_1 radical.

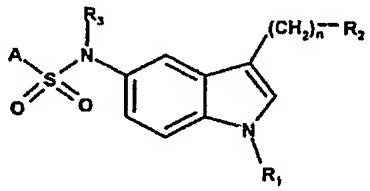
7. Process for preparation of physiologically acceptable salts of the compounds with the general formula (I), according to claim 1, consisting in making react a compound with the general formula (I) with a mineral acid or an organic acid in a suitable solvent.

8. Pharmaceutical compositions, characterised in that they contain, in addition to the pharmaceutically acceptable excipients, at least one compound with the general formula (I) or one of its physiologically acceptable salts, according to claims 1 and 2.

9. Compound according to claim 1 for prevention or treatment of anxiety, depression, cognitive memory disorders and senile dementia processes and other dementias where a cognition deficit is predominant, psychosis, infantile hyperkinesia (ADHD, attention deficit /

hyperactivity disorder) and other disorders mediated by the serotonin 5-HT_6 receptor in mammals, including man.

10. Use of a sulphonamide derivative with the general formula (I),



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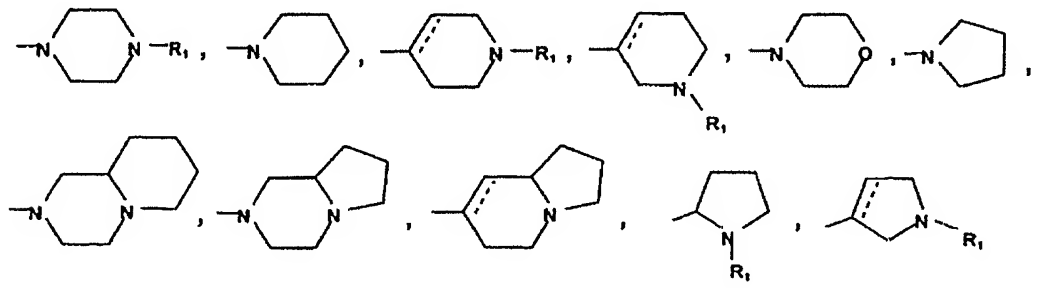
- a bicyclic heteroaromatic ring containing 1 to 3 heteroatoms selected from among oxygen, nitrogen and sulphur, optionally substituted by 1 or 2 halogen atoms or by a C_1-C_4 alkyl radical;

R_1 represents hydrogen, a C_1-C_4 alkyl radical or a benzyl radical;

n represents 0, 1, 2, 3 or 4;

R_2 represents $-NR_4R_5$ or a group with formula:



wherein the dotted line represents an optional chemical bond;
R_3, R_4 y R_5 independently represent hydrogen or a C_1-C_4 alkyl;
or one of its physiologically acceptable salts,

in the preparation of a medicament for preventing or treating anxiety, depression, cognitive memory disorders and senile dementia processes and other dementias where a cognition deficit is predominant, psychosis, infantile hyperkinesia (ADHD, attention deficit / hyperactivity disorder) and other disorders mediated by the serotonin 5-HT_6 receptor in mammals, including man.

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Patent Agents